

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Please amend Claims 1 and 9 as follows:

1. (Currently Amended) A magnetic resonance imaging apparatus comprising:

an RF coil system comprising at least two sets of at least two RF coils which ~~detects~~ detect RF signals from a region of interest,

at least two receiver channels which receive and process the detected RF signals, and

a control unit which controls at least one switch that selectively routes ~~at least one~~ a first and a second detected RF signal from a first set of the at least two RF coils towards separate receiver channels via different one-particular paths of at least two possible paths, where a switch of said at least one switch is positioned along each path of said at least two possible paths that selectively diverts said first and second detected RF signals along two different paths of at least four possible paths, wherein at least one selectively diverted first and second detected RF signal said at least one detected RF signal is combined with [[an]] a respective detected RF signal [[of]] from a second set of the at least two RF coils selectively diverted by a different switch of said at least one switch along a particular path depending on the imaging parameters and forms combined signals, wherein the particular path includes a portion of one of said two different paths of said at least four possible paths, said control unit applies the combined RF signals to separate receiver channels,

~~such that at least two detected RF signals can be combined to form a combined signal and the combined signal is applied to one particular receiver channel.~~

2. (Currently Amended) A magnetic resonance imaging apparatus as claimed in claim 1, wherein said control unit is provided to and combines the detected RF signals of several groups of the at least two RF coils into a separate receiver channel.

3. (Previously Presented) A magnetic resonance imaging apparatus as claimed in claim 1, wherein said RF coil system comprises two sets of four RF coils.

4. (Previously Presented) A magnetic resonance imaging apparatus as claimed in claim 1, wherein said RF coil system comprises a birdcage head coil arrangement.

5. (Currently Amended) A magnetic resonance imaging apparatus as claimed in claim 4, wherein said control unit is provided to and combines the detected RF signals of RF coils arranged on opposite sides of the head.

6. (Currently Amended) A magnetic resonance imaging apparatus as claimed in claim 1, wherein said control unit is provided to and combines the detected RF signals of neighboring RF coils.

7. (Currently Amended) A magnetic resonance imaging apparatus as claimed in claim 1, wherein said control unit is provided to which selects and/or combines the detected RF signals of the at least two RF coils depending on the phase encoding direction.

8. (Currently Amended) A magnetic resonance imaging apparatus as claimed in claim 1, wherein said control unit is provided to which selects and/or combines the detected RF signals of the at least two RF coils depending on the desired SENSE reduction direction.

9. (Currently Amended) A magnetic resonance imaging method, comprising the steps of:

detecting RF signals from a region of interest while using an RF coil system comprising at least two sets of at least two RF coils,

receiving and processing the detected RF signals while using at least two receiver channels, and

controlling at least one switch that selectively routes ~~at least one~~ a first and a second detected RF signal from a first set of the at least two RF coils towards separate receiver channels via different one-particular paths of at least two possible paths, where a switch of said at least one switch is positioned along each respective path of at least two possible paths that selectively diverts said first and second detected RF signals along two different paths of at least four possible paths, wherein at least one selectively diverted first and second detected RF signal is combined with a respective detected RF signal from

a second set of the for combining the RF signals of at least two RF coils selectively diverted by a different switch of said at least one switch along a particular path depending on the imaging parameters and forms combined signals and applying the combined RF signals to separate receiver channels, wherein the particular path includes a portion of one of said two different paths of said at least four possible paths, such that at least two detected RF signals can be combined to form a combined signal and the combined signal is applied to one particular receiver channel.

10. (Currently Amended) The method as claimed in claim 9, wherein said controlling step comprises the step of combining detected RF signals of several groups of the at least two RF coils into a separate receiver channel.

11. (Previously Presented) The method as claimed in claim 9, wherein said RF coil system comprises two sets of four RF coils.

12. (Previously Presented) The method as claimed in claim 9, wherein said RF coil system comprises a birdcage head coil arrangement.

13. (Currently Amended) The method as claimed in claim 12, wherein said controlling step combines the detected RF signals of RF coils arranged on opposite sides of the head.

14. (Currently Amended) The method as claimed in claim 9, wherein said controlling step combines the detected RF signals of neighboring RF coils.

15. (Currently Amended) The method as claimed in claim 9, wherein said controlling step selects and/or combines the detected RF signals of the at least two RF coils depending on the phase encoding direction.

16. (Currently Amended) The method as claimed in claim 9, wherein said controlling step selects and/or combines the detected RF signals of the at least two RF coils depending on the desired SENSE reduction direction.